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EXAMINER

MASINICK, MICHAEL D

ART UNIT PAPER NUMBER

2125

DATE MAILED: 05/02/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/806,962

Applicant(s)

DUFORT, JOHN FRANCIS

Examiner

Michael D Masinick

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 January 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6. 6) ☐ Other: _____

DETAILED ACTION

Background

Lithophanes have been made since the early 19th century and were first first patented in the United Kingdom in 1828 by Robert Griffith Jones (English Patent No. 5626). Examiner was unable to obtain a copy of this patent.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 27 is rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention.

3. Claim 27 recites the limitation "the material". There is insufficient antecedent basis for this limitation in the claim.

4. Claim is further treated as best understood by the examiner.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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2. Claims 1-6, 10, and 11 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by German Patent EP0007125 to Herman Fuller.

3. Referring to claim 1, Fuller shows a method of forming an article, the method comprising the steps of: determining the relative intensity at different points of an image; forming an article from a translucent material so that the article has a relief such that the thickness corresponds to the different intensities of the image (ABSTRACT).

4. Referring to claim 2, Fuller shows where the article has thicker portions corresponding to the darker regions of the original image, and thinner portions corresponding to the lighter regions of the original image (ABSTRACT).

5. Referring to claim 3, Fuller shows where the relative intensities of the different points of the original image is determined by scanning the image into a computer (ABSTRACT).

6. Referring to claim 4, Fuller shows where the image is analyzed by dividing this into separate picture elements, and determining the intensity of each picture element. Examiner notes that this concept is inherent to modern computer scanners by saving pictures as rows of pixels where each pixel has a color value and intensity associated with it (ABSTRACT).

7. Referring to claim 5, Fuller shows where a value corresponding to the intensity of each picture element is stored in memory ("computer or storage unit", abstract).

8. Referring to claim 6, Fuller shows where the stored values are used to control a computer driven engraving machine to form the article (ABSTRACT).

9. Referring to claim 10, Fuller shows where the step of forming the article comprises the step of engraving translucent material (ABSTRACT).

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10. Referring to claim 11, Fuller shows the the engraving step is achieved using a numerically controlled engraving machine. While fuller does not specifically say that it is a numerically controlled machine, it would be inherent to engraving machines today to be numerically (computer) controlled.

11. Claims 7 and 9 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by “What is a lithophane?” website detailing the history of lithophanes.

12. In the third paragraph, this website details the early history of lithophanes using wax and plaster molds in the creation of lithophane articles.

13. The website shows all features of claim 1, and referring to claim 7, where the step of forming the article includes the step of forming a mould having a relief corresponding to the relative intensity of the points of the original image and molding the article from a translucent material in the mould to form an article having different thicknesses corresponding to the different intensities of the original image.

14. Referring to claim 9, The website explains how these moulds were carved by hand, thus reading on the claim of an engraving step.

15. Claims 7-9 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Affidavit signed by Alexander Shek, Feb 16, 2001.

16. Shek shows all features of claim 1, and referring to claim 7, where the step of forming the article includes the step of forming a mould having a relief corresponding to the relative intensity of the points of the original image and molding the article from a translucent material in the

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mould to form an article having different thicknesses corresponding to the different intensities of the original image.

17. Referring to claims 8 and 9, Shek goes on to show the use of engraved metal moulds. (Page 2, lines 20-25 and Page 3, lines 9 and 10).

18. Claims 13, 19, 20, and 22 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Affidavit signed by Alexander Shek dated Feb 16, 2001.

19. Regarding claim 13, Shek clearly shows the production of lithophanes as set out in claim 1 above. Shek then goes on to show the production of mass produced plastic injection molded lithophanes (lithocrylics) in which were invoiced in August of 1996.

20. Regarding claim 19, It would have been an inherent concept of plastic molding to use a colored plastic. Plastic is inherently white when created and die is used to color the plastic to the desired color.

21. Regarding claim 20, it would have been a design choice of the plastic molding creator to use a layered plastic with different colored layers or to "paint" the plastic a different color by dipping or other known means.

22. Regarding claim 22, see above rejections.

23. Claims 26, 29, and 30 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by "New life into old: Delcam with Dali" article.

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24. Dali article clearly shows a container containing a liquid, the container being shaped to be of variable width, the width at different points corresponding to the relative intensity of an image (whole article and picture).

25. Regarding claims 29 and 30, it would have been a design choice of the bottle creator to use a layered glass or plastic with different colored layers or to “paint” the glass or plastic a different color by dipping or other known means.

26. Claims 32 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Affidavit signed by Alexander Shek, Feb 16, 2001.

27. The Shek affidavit shows a method of forming a plastics article through which an image is observable when the article is illuminated with light from behind due to variations in the thickness of the material of the article corresponding to variations in intensity of the image to be observed, the method comprising the steps of: determining the relative intensity at different points of an image, converting the determined relative intensity into data for controlling a mould forming machine; automatically forming a mould in which the relief on the mould surface corresponds to the determined relative intensity, and moulding the article in the mould, the article being moulded from translucent plastics material including a pigmentation.

Claim Rejections - 35 USC § 103

28. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

29. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over German Patent EP0007125 to Herman Fuller as shown above and in view of U.S. Patent No. 5,925,500 to Yang et al.

30. Fuller does not show where the engraving step is laser engraving.

31. Laser engraving is well known in the art as being a quick way to easily remove small amounts of a material.

32. Yang et al shows the use of laser engraving to create printing plates (Column 1).

33. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the laser engraving method of Yang to produce the engraved lithophane articles of Fuller because printing place consists of virtually the same three dimensional pattern as a lithophane, and according to Column 1, lines 35-38 of Yang, "Such plates offer... durability and ease with which they can be made".

34. Claims 14-16, 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over German Patent EP0007125 to Herman Fuller.

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35. Herman Fuller does not show that the article can be formed of a confectionary material, soap, or wax.

36. The concept of reliefs created on confectionary material, wax, or soap is well known. Many candies and soaps are marketed with the logo or name of the soap "etched" or otherwise molded into the object. Since the same machines are used to mold these objects as would be used to create lithophane type objects, it would have been obvious to one of ordinary skill to use a confectionary material, wax, or soap in the lithophane creation method of Fuller.

37. Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over German Patent EP0007125 to Herman Fuller in view of US Patent No. 5,116,533 to Grandmont et al.

38. Fuller does not show the use of a luminescent particles or providing a luminescent layer on or in the article.

39. Grandmont shows a moldable wax based marker containing phosphorescent particles.

40. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the phosphorescent particles of Grandmont in the article created by the method of Fuller because (as taken from Grandmont Col 1, lines 14-21) "It has long been recognized that the appeal of certain toys can be enhanced by imparting phosphorescent properties to the various elements thereof."

41. Claim 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over German Patent EP0007125 to Herman Fuller in view of US Patent No. 5,503,583 to Hippely et al.

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42. Fuller does not show the creation of lithophanes with a heat sensitive material whose light transmissive properties vary dependant upon the temperature of the material.

43. The use of thermochromic materials is well known. Hippely shows a child's toy painted with a thermochromic paint in order to provide various patterns, designs, letters, and numbers according to differing temperatures.

44. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the thermochromic temperature sensitive materials of Hippely in the lithophane article creation method of fuller because children are entertained by color changes as shown in Hippely Col 1, line 50 – Col 2, line 5.

45. Claims 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over “New life into old: Delcam with Dali” (hereafter called “Dali”) article in view of US Patent No. 5,116,533 to Grandmont et al.

46. Dali does not show the use of a luminescent particles or providing a luminescent layer on or in the article.

47. Grandmont shows a moldable wax based marker containing phosphorescent particles.

48. The use of phosphorescent particles is well known. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the phosphorescent particles of Grandmont in the article of Dali because (as taken from Grandmont Col 1, lines 14-21) “It has long been recognized that the appeal of certain toys can be enhanced by imparting phosphorescent properties to the various elements thereof.”

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49. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over over “New life into old: Delcam with Dali” (hereafter called “Dali”) article in view of US Patent No. 5,503,583 to Hippely et al.

50. Dali does not show the creation of lithophane type bottles with a heat sensitive material whose light transmissive properties vary dependant upon the temperature of the material.

51. The use of thermochromic materials is well known. Hippely shows a child’s toy painted with a thermochromic paint in order to provide various patterns, designs, letters, and numbers according to differing temperatures.

52. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the thermochromic temperature sensitive materials of Hippely in the lithophane bottle creation method of Dali because children are entertained by color changes as shown in Hippely. Col 1, line 50 – Col 2, line 5.

53. Claims 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Affidavit signed by Alexander Shek, Feb 16, 2001 in view of the “Injection Molding Handbook”.

54. In addition to what has been shown above in relation to claim 32, Shek does not show forming a tool in order to press or stamp the relief pattern onto an article.

55. The interchangeability of injection molding and stamping of plastics or other materials is well known in the art.

56. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the machining techniques shown in Shek to produce a stamp for the article

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rather than a mold for the article because the basis of making a stamp vs. making a mould is the same. This comparison is shown in the "Injection Molding Handbook" page 1061.

57. Claims 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Affidavit signed by Alexander Shek, Feb 16, 2001 in view of the "Injection Molding Handbook" and further in view of U.S. Patent No. 4,882,176 to Koyama et al.

58. In addition to what has been shown above in relation to claims 33 and 34, the Affidavit in view of the "Injection Molding Handbook" does not show that the material comprises chewing gum.

59. Koyama shows the moulding of confectionary products, namely chewing gum.

60. It would have been obvious to use chewing gum as the material in the lithophane producing method of Shek (in view of the injection molding handbook) because it is "often desirable to form edible products into complex three dimensional objects" (Koyama Col 1, lines 13-15).

Conclusion

Examiner notes that claims 26-31, drawn to a bottle of varying thickness, may in the future be restricted from the remaining claims as a separate invention. At this time, in order to further prosecution, no restriction requirement has been made.

61. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and to the state of the art at the time of invention.

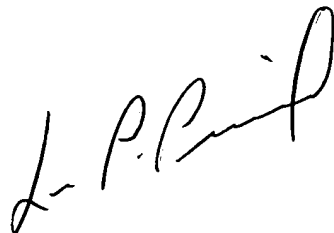
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael D Masinick whose telephone number is (703) 305-7738. The examiner can normally be reached on Mon-Fri, 7:30-4:00. Examiner can also be reached quickly via email at Michael.Masinick@uspto.gov.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on (703) 308-0538. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7239 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

mdm
April 28, 2003

A handwritten signature in black ink, appearing to read 'L. Picard', written in a cursive style.

**LEO PICARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100**

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